

EDITORIAL

Elusive Waste The Fermi Paradox in US Health Care

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In 1950, at lunch with 3 colleagues, the great physicist Enrico Fermi is alleged to have blurted out a question that became known as “the Fermi paradox.” He asked, “Where is everybody?” referring to calculations suggesting that extraterrestrial life forms are abundant in the universe, certainly abundant enough that many of them should have by then visited our solar system and Earth. But, apparently, none had.

Health care in the United States has its own version of the Fermi paradox. It involves the strong evidence of massive waste that is updated in the Special Communication by Shrank and colleagues in this issue of *JAMA*.¹ The authors recalculate the pro-

portion of US health care expenditures that is waste. Their estimates, which they suggest are conservative, are similar to other major reports of the past decade, which came up with median estimates of waste

amounting to 30% to 35% of total health expenditures.^{2,3} Shrank and colleagues estimated that waste represents 20% to 25% of US health care expenditures, but they explicitly did not include some extrapolations from Medicare data to the population at large. The authors further reviewed the literature on efforts to reduce waste, which, they claim, suggests that about 25% of that amount—approximately 5% of total health care spending—could be reduced with implementation of well-documented, current programs.

These are massive numbers. With US health care expenditures exceeding \$3.5 trillion annually, 25% of the total would amount to more than \$800 billion per year of waste (more than the entire 2019 federal defense budget, and as much as all of Medicare and Medicaid combined). Even 5% of the total cost is more than \$150 billion per year (almost 3 times the budget of the US Department of Education).

That is worth repeating: by many pedigree estimates, annual waste in US health care equals or exceeds the entire annual cost of Medicare plus Medicaid.

But, to paraphrase Fermi, “Where is it?” Shrank and colleagues, like the prior studies they channel, examined 6 categories of waste: failure of care delivery, failure of care coordination, overtreatment or low-value care, pricing failure, fraud and abuse, and administrative complexity; they estimated the amount of each. In one sense, “There it is!”

But that is not the proper analogy to Fermi’s paradox. The paradox is that, in an era of health care when no dimension of performance is more onerous than high cost, when many hospitals and clinicians complain that they are losing money, when individuals in the United States are experiencing financial

shock at absorbing more and more out-of-pocket costs for their care, and when governments at all levels find that health care essentially confiscates the money they need to repair infrastructures, strengthen public education, build houses, and upgrade transportation—in short, in an era when health care expenses are harming everyone—as much as \$800 billion in waste (give or take a few hundred billion) sits untapped as a reservoir for relief. Why?

Imagine a breakthrough in any other sector of commerce—cars or plane travel or computers—in which some spotlight suddenly revealed 30% of production costs to be pure waste. How long would it be before entrepreneurs would make efforts to eliminate that waste and return the money to their customers or to their stockholders? In an effective competitive market, that should not take long at all. Slow responders might not survive; quick ones would likely thrive and make a lot more money.

Actually, that is not quite what happens. Even in highly competitive industries, the methods of “lean thinking”⁴ and other approaches to uncovering and removing waste have been surprisingly slow to diffuse. The viscosity comes from legacy investments in capital structures, legacy workforce habits and configurations, and legacy thinking, blinding even smart executives and boards of directors to the need to change. Nonetheless, the tectonics of waste reduction in other industries are strong, and eventually waste is eliminated, or at least minimized. Computers get faster and less expensive. Household appliances get better and (absent tariff wars) less costly. Productivity rises more or less steadily.

Meanwhile, health care costs more and more and more, with expenditures relentlessly increasing at a multiple of the general rate of inflation. Incredibly, even health care economists purvey a kind of double-speak; they score a slowing of the rate of rise of costs as a cost reduction. That deceptive language would not last long when it came to cars or computers.

So, where is this waste? Why, with 25% or 30% of all costs not helping achieve health or relieve disease, has not a single hospital or clinic or integrated health system drawn on that “waste account” to reduce its costs thrillingly? Not even one?

There are at least 4 plausible explanations. First, maybe the waste is not really there. Second, maybe the waste cannot, technically, be extracted. Third, maybe it is not interesting enough, yet, to reduce waste. And fourth, maybe politics paralyzes change.

The first explanation—that waste is not present—is not tenable. The current estimates by Shrank and colleagues are just the latest in a long line of studies of non-value-added processes in US health care. The lineage of these reports goes back to the pathfinding studies of variation in health care costs by Wennberg and colleagues, which repeatedly found several-fold differences in

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resource use among small geographic areas with no relationship whatsoever with metrics of quality outcomes.⁵ The estimates also find roots in studies of supply-driven demand, famously “Roemer’s law,” that a built hospital bed will be a filled hospital bed. Supply, not need, drives demand.⁶ It is indeed remarkable that efforts at comprehensive estimation of waste levels have repeatedly come up with similar numbers—25% to 35%—from different sources using different methods of assessment.⁷

As for the second potential explanation, is it possible that the waste cannot be extracted without damage to the core of care? Is waste marbled so thoroughly into health care processes and structures that no scalpel is fine enough to work it free? The report by Shrank et al suggests the opposite. It finds numerous studies of effective cost reduction for some types of waste (failures in care delivery, coordination failures, and overtreatment), at least in research contexts, albeit not at large scale.

Beyond that, some categories of waste are so glaring that, *prima facie*, they can be removed with enough will. Consider, for example, the administrative waste that comes with cumbersome and inconsistent coding and billing practices. “Cannot remove” is just implausible compared with “will not remove.” Similarly, widespread overuse of ineffective drugs, tests, and procedures is difficult to justify by some vague claim of complexity. If a clinical intervention does not work, why shouldn’t physicians just stop using it? Equally obvious is the effect of greed on prices, such as when manufacturers raise the cost to consumers and insurers for insulin, new biologics, and equipment⁸ absurdly just because they can and no one stops them.

What about the third hypothesis: that waste reduction is just not interesting or a priority to the people and organizations that can, technically, achieve it? This is a far more plausible explanation. A telltale line from the article by Shrank et al is this one: “The administrative complexity category was associated with the greatest contribution to waste, yet there were no generalizable studies that had targeted administrative complexity as a source for waste reduction.” In other words, no one has seemed interested enough in this high-potential change to do something about it.

Many health services research studies have shown that, under the payment systems currently in charge, some of the very methods for waste reduction that Shrank et al cite would reduce profit for the health care organizations that use them.⁹ The

much-touted switch from “volume” to “value” in health care payment that many policy experts push for has so far been rather timid and incomplete. And a critical review of evidence to date must conclude that this approach is of unproven worth.

The fourth explanation, politics, is the most plausible explanation of all. What Shrank and colleagues and their predecessors call “waste,” others call “income.” People and organizations (for-profit and not-for-profit) making big incomes under current delivery models include very powerful corporations and guilds in a nation that tolerates strong influences on elections by big donors. Those donors now include corporations whose “right” to “free speech” as “persons” has been certified by the US Supreme Court, conferring on them an unlimited license to support political candidates financially. When big money in the status quo makes the rules, removing waste translates into losing elections. The hesitation is bipartisan. For officeholders and office seekers in any party, it is simply not worth the political risk to try to dislodge even a substantial percentage of the \$1 trillion of opportunity for reinvestment that lies captive in the health care of today, even though the nation’s schools, small businesses, road builders, bridge builders, scientists, individuals with low income, middle-class people, would-be entrepreneurs, and communities as a whole could make much, much better use of that money.

Some of this physicians cannot change, but much they can. Indeed, the localized successes reviewed by Shrank et al, such as reducing overtreatment, improving coordination, and making care safer, prove that aims like those are all within the reach of physician leaders who commit to waste reduction. Those successes should spread. The American Board of Internal Medicine’s Choosing Wisely campaign¹⁰ could be much bolder in its next iteration. In local markets, physicians can champion changing payment from fee-for-service to shared risk and forms of global payment that encourage everyone to end wasteful care. In the end, physicians can and should act with strong voices and political courage to openly oppose greed and deception in pricing policies wherever they arise.

In large measure, the challenge of removing waste from US health care and reinvesting that harvest where it could do much more good is not a technical one. It is a political one. In short, removing waste from US health care will require both awakening a sleepy status quo and shifting power to wrest it from the grip of greed.

ARTICLE INFORMATION

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Published Online: October 7, 2019.
doi:10.1001/jama.2019.14610

Conflict of Interest Disclosures: None reported.

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